THE CHRONICLE

SPAWAR SYSTEMS CENTER CHARLESTON

Fall 2004

In this Issue

Jim Leonard and Truett Stone, acoustic submarine hunters at the Fast Time Analyzer System lab

(Feature story, p. 16)

Photo: Harold Senn/SSC Charleston

Captain's Call

Captain John W.R. Pope III, USN
SSC Charleston Commanding Officer

SSC Charleston and our neighbors in the southeast have certainly had an eventful few months since the last issue of *The Chronicle*. We've weathered a hurricane season that just didn't want to stop. I'm extremely proud of our workforce that hunkered down when the storms approached, accounted for everyone after they passed, and got our systems and services back up in the cases when the hurricanes overwhelmed our preparations. A special tribute is owed to our Pensacola office. They received the most damage of the season, but responded with outstanding restoral efforts to get warfighter support back on-line!

We also have several other outstanding efforts to share with you. The command closed out fiscal year 2004 with financial and contracts performance that exceeded the benchmarks we set in 2003. Once again this was a cross-command team effort that capitalized on our best-in-class practices, built on last year's lessons learned, and demonstrated our ability to contribute to Sea Enterprise goals.

Recently, we developed our FY05 Command Business Plan to establish "customer first" principles. Through the alignment of higher authority guidance from the Departments of Navy, Defense, and Homeland Security, we reassessed our mission, vision, core values, and critical influences of our environment.

The Business Plans of all four SPAWAR Systems Centers were recently briefed to Rear Adm. Slaght and other SPAWAR leadership. Improving the coordination of our warfighter efforts across the SPAWAR enterprise is the primary driver for the Business Plan focus. Other anticipated benefits include:

- Identify programs that we can help with FORCEnet transformation
- Opportunity to check for SPAWAR core fit and viability
- Encourage cross-enterprise participation and involvement
- Helps us set priorities and allocate resources
- Ensure current initiatives are on track
- Helps us anticipate rather than react

We continued to have great opportunities to tell our story of speed-to-capability to Navy and Marine Corps leadership. Recent distinguished visitors include: Mr. John Young (ASN RDA); Sen. George Allen (R-Va.), Mr. Andrew Cox (PEO C4I & Space); Vice Adm. Szemborski (OSD PA&E), Rear Adm. (sel) Rodriguez (SPAWAR 05). In all cases, our initiatives and innovations in support of the joint warfighter shone brightly.

FY05 has started with great momentum and an energized workforce. The SPAWAR goal for FORCEnet of ***Transforming Information Into Decisive Effects*** is a guiding principle in all our efforts to support the Navy, Marine Corps and joint warfighter. FORCEnet will transform situational awareness, provide effects of mass without the need to mass forces, and accelerate speed of decision.

Our command looks forward to another successful year. I wish you and your family a safe and enjoyable holiday season.

The Chronicle
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SSC Charleston's Mission
What we do: We enable knowledge superiority to the warfighter through the development, acquisition, and life cycle support of effective, capable and integrated C4ISR, IT and Space systems.

SSC Charleston's Vision
Where we want to be in the future: We will become the premier provider of C4ISR, IT and Space capabilities.

The Chronicle is a quarterly publication designed for Space and Naval Warfare Systems Center, Charleston employees. Its purpose is to inform, educate, entertain and generate new ideas. An official publication, The Chronicle is printed using appropriated funds in compliance with Navy publications and printing regulations. Contents of The Chronicle are not necessarily the official views of, or endorsed by, the U.S. Government, the Department of Defense, the U.S. Navy or SPAWAR Systems Center, Charleston.
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From the desk of

James Ward, Executive Director

Achieving netCentricity through an employee portal

As the Departments of Navy, Defense, and Homeland Security move forward to meet warfighter and first responder challenges of the 21st century, we are embarking on a journey of transformation that will usher in new ways of deterring conflict, new capabilities for waging war, and new technologies that will lead to major increases in operational effectiveness. Our workforce vision recognizes the necessity to keep our competencies in alignment with anticipated critical skills for the future.

New technology, process improvements and economic factors are agents shaping our strategic direction. Clearly, our challenge is to successfully integrate and leverage emerging technologies and technological innovations to better serve our internal and external customers. It means influencing and being influenced by mission and business realities. A well-conceived and executable strategy will provide the necessary roadmap for this transformation.

Intellectual capital

Intellectual capital is our most competitive advantage. ***I know you're valuable and I want to make you indispensable.*** Our Commander's Intent encourages you to take ownership of your personal development and to work to grow appropriate skills to accomplish your piece of our mission. One aspect of the Commander's Intent is to put more emphasis on competency development, warfighter relevance and performance evaluations. By identifying those responsible for aligning core capabilities and competency development with our strategic direction, we have increased visibility to the vital role that you play in our ability to support our customers.

The enterprise that puts in place effective employment procedures — as well as moves toward internal collaboration to take advantage of the great diversity of information, ideas, technology, and intellectual capital available to it — can achieve a unity of purpose. The enterprise that has an environment with an entrepreneurial spirit that is balanced with group learning and personal accountability will be recognized as one that commits itself to creating future success. We will build on what we've already accomplished and look at innovative ways to continue and improve these processes.

We need to derive optimal value from our resources — including our intellectual capital. This can be challenging, particularly since we have applications and information scattered across our enterprise. We all spend too much time tracking down, reprocessing, and reformatting data. At the same time, existing resources are underutilized because they are either too difficult to access or no one is aware that they are available. We want everyone to use these resources and collaborate in real-time, with information applications and tools needed to be more productive. To do this I'm embarking on the idea of deploying an employee portal.

Employee portal

A portal is your gateway to content or information. Portals allow us to access and publish content in an organized way, and are the starting point for accessing information. An employee portal can help us reduce costs by replacing the distribution and processing of paper documents with online and self-service processes. It can enhance security by better managing access to our resources. Further, it can increase our competitive advantage by making sure you receive critical news and announcements so you can take action quickly while staying aligned with our enterprise goals. It will also streamline workflows by enhancing collaboration among teams and departments. Finally, an employee portal ensures consistent communication across our enterprise.

Portals enable tailored, immediate communications that enhance your ability to get feedback when you need it, not when we have time to give it. Preferred practices and workflow paradigms (such as acquisition, systems engineering, program management, project staffing, budgeting, contracting for services, and career development) embedded in our robust portal will eliminate confusion about our approaches to common challenges. We will not try to adapt the technology to our workflow but

will adapt our workflow to the technology to realize new efficiencies and effectiveness.

Agility means success

In today's competitive environment, business success depends on business agility. Portals provide the perfect vehicle for increasing business agility by streamlining business interactions. By making content and services more easily available to employees, portals enable more informed decisions, better customer service, and improved interaction. Our employee portal will change the way you work by providing you with a one-stop information source for all of your information needs. Its design will ensure that you "can make a difference" by owning your own data and having the power to initiate changes via web-enabled tools and transactions.

The shift towards self-reliance and the treatment of employees as valued business partners favors increasing the use of self-service benefits packages that lead to automated systems that enable better information access, employee benefits self-service, and customization of benefits by employees. We are currently looking to link employees to a wide variety of existing service providers outside of our enterprise, since our employee portal can provide a common gateway to these service providers. For example, think about myPay or the Employee Benefits Information System (EBIS).

Keeping pace with initiatives

OPM has several ongoing initiatives, many of which will become part of our everyday worklife. Their eTraining initiative is creating a premier government-wide online training environment that supports career development. The eTravel program creates a common website for federal travel services. To simplify and standardize payroll policies and procedures, ePayroll is improving integration of payroll with financial management. The Recruiting-One-Stop initiative is expanding and streamlining the capabilities of the federal employment application process. A secure infrastructure solution to verify identities and allow electronic signatures for electronic transactions is being provided through eAuthorization.

In our drive to export these administrative services, we face three critical questions: 1) How will these online services affect our workforce? 2) Does our existing workforce have the capability to become self-reliant? 3) What strategies and resources are needed to ensure that our future workforce competency and capability requirements are met?

Having asked these questions, I will focus on those who are providing these services and their new roles as strategic partners and change agents. How do we restructure those offices and functions, and how do we develop new skill sets for those currently doing this work so that they do not become obsolete as this technology replaces their day-to-day functions?

The recent establishment of our Code 80 Tidewater Department serves as a good example of how things are changing. There we are bundling our customer service offerings. Specifically, we are realigning our organizational response to our major Tidewater customers. Code 80 will need to draw deep support from Charleston and the SPAWAR enterprise to best leverage our collective capabilities in supporting our customers. There are, and will continue to be, many other workforce changes as we seek to create organizational dependencies. As we do this, we must drive out any redundant operations. There simply is no way to complete our mission of today using the multi-layered approach of yesterday.

I don't want to leave valuable people behind or unemployable, so I will work to find a way to identify these folks and develop their future curves to embrace needed changes by identifying what current work functions go away and what new work functions are down the road. I know that the process of change is challenging. Most employees are likely to experience concern about their jobs and futures when change is in the air. Left unchecked, these fears can increase resistance to change. A challenge for Capt. Pope and me is to provide you with the tools and knowledge to embrace change. We can overcome these challenges by working together to meet the needs and expectations of our customers and stakeholders.

As the old saying goes, knowledge is power. With a well-designed employee portal, we will empower you. It's all part of connecting, communicating, and contributing!

Change is on the way

SPAWAR Systems Center, Charleston will drive change by:

- enabling self-service to empower you;
- utilizing a more effective media channel to increase awareness;
- enabling virtual communities, organizations, and "work anywhere" structures;
- reinforcing command branding: vision, values, and behavior; and
- driving increased innovation, customer focus, and accountability.

SSC Charleston first federal agency to receive

Outstanding

Small Business Surveillance review

By Diane Owens
Strategic Planning Office

SPAWAR Systems Center, Charleston became the first federal agency to ever receive an Outstanding Small Business Surveillance Review from the U.S. Small Business Administration (SBA). The award was presented to SSC Charleston Commander Capt. John W.R. Pope III by local and regional SBA officials during a ceremony on Sept. 3.

This marks the first time in its 51-year history that the SBA designated a rating above satisfactory to any federal agency. Under the Small Business Act, federal agencies are required to give fair consideration to small businesses when awarding contracts. Small businesses are independently owned and operated, have fewer than 500 employees and have annual revenues below $8 to $10 million.

Every year, the SBA selects five sites from each federal agency for a small business audit. SSC Charleston was chosen as one of the Navy's audit sites for 2004. From May 3 through May 7, SBA auditors reviewed hundreds of contracts and related documents to determine statutory and regulatory compliance with the Small Business Act. In addition to the outstanding rating, the command was recognized for processes and analyses that were well documented.

SSC Charleston has established innovative programs to promote small business contracting through their Small and Disadvantaged Business Utilization Office. Approximately $500 million is contracted annually to small businesses by the command. This represents 40 percent of SSC Charleston's total contract awards.

The outstanding rating is the result of strong management support and teamwork between the technical codes, contracts office, and the Small and Disadvantaged Business Utilization Office.

SSC Charleston awarded $1.9 M to manage Manufacturing Technical Assistance and Production Program

By Diane Owens
Strategic Planning Office

Small business is big at SPAWAR Systems Center, Charleston. For years the command has been a leader in the Navy's small business program, and that role is continuing. SSC Charleston was awarded $1.9 million by the Department of Defense to execute the first year of a U.S. Navy Manufacturing Technical Assistance Production Program (MTAPP) - The Next Generation initiative.

SSC Charleston selected SAGE Systems Technologies, LLC, an Alaska Native Corporation, to manage the program. SAGE will assist small manufacturing firms to improve their manufacturing processes, quality programs, program management and federal cost accounting skills. The contract, which includes four option years, has the potential to reach nearly $10 million over the next five years.

Photo by Harold Senn

The Navy's Director of Small Business, Nancy Tarrant (center right), met with Executive Director James Ward, Small Business Program Manager Phyllis "Ann" Howell and SSC-C Commander Capt. John W.R. Pope III to kick-off the award.

MTAPP – The Next Generation is a federally funded program designed to develop small businesses with manufacturing skills. The goal is to make them more competitive and provide these businesses with the information and skills required to successfully bid on government contracts. The initiative will result in a national network of technically competent small manufacturing businesses that have the appropriate infrastructure, processes, and program management skills to provide goods and services for government and commercial enterprises.

Nancy Tarrant, director of the Navy's small business program in Washington, D.C., and SAGE representatives visited SSC Charles-

(continued, p. 6)

$1.9M award

(contiued from page 5)

ton in July for a kickoff conference highlighting the award. Tarrant said the Navy selected this command to administer the contract with SAGE because of its successful history of dealing directly with small businesses.

Under the program, representatives from small businesses are introduced to representatives from large businesses. This lays the groundwork for developing supplier and subcontractor relationships. Program participants are taught how to do business with government agencies.Small manufacturing businesses are also provided with training on specific manufacturing topics and technical assistance, including access to web-based information. Under the continuous improvement program, small businesses can improve their program management skills, implement best industry practices, enhance their competitiveness and continue to grow.

Twenty small businesses in the southeastern United States were identified for the MTAPP - The Next Generation program. They are currently being assessed to determine their eligibility to participate. Two of the small businesses are located in the Charleston area. They are CMMC Machine of North Charleston and EIC Electronics of Hanahan.

Ivan slams Pensacola

Photo courtesy of Kevin Doll

Winds from Hurricane Ivan turned wood beams into missiles, severely damaging Bldg. 603 at the Pensacola Naval Air Station. Bldg. 603 houses most of the SSC Charleston operations.

Photo courtesy of Kevin Doll

Buildings were not the only things damaged by Ivan. Cars and aircraft at the installation also suffered great damage.

Photo courtesy of Kevin Doll

Flooding caused major problems in Ivan's aftermath.

SSC Charleston responds

By Kevin Doll (J513KD) and Tonya Lobbestael, Editor

Florida had some unwelcome visitors in August and September ... Charley, Frances and Jeanne. But none was more unwelcome in Pensacola than Ivan. Packing 130 mph winds, the storm ripped through the town and the Naval Air Station leaving massive damage estimated in the hundreds of millions of dollars.

SSC Charleston's Pensacola office was not spared. Both SPAWAR buildings sustained heavy damage from wind, flooding and tornadoes. Critical Navy network systems went down and the area was without power and communications for several days.

SSC Charleston immediately responded to assist the Pensacola office and the Commander, Naval Installations (CNI) at the Naval Air Station Pensacola in restoring their facilities and communications. The response team headed south with five satellite phones, 11 talk-around phones, 23 push-to-talk phones and the support of MILCOM Systems.

The first issue was power. Joe Beckham (J0AP1), head of facilities for SSC Charleston, Pensacola, acquired a two mega-watt generator. He also managed to get the diesel fuel needed to run the generator delivered twice a day. Once the generator was running, the team quickly restored the critical network systems located in the SPAWAR offices in Building 603. Limited power was also restored allowing the response team to assist in damage assessment.

Photo courtesy of Kevin Doll

The SSC Charleston response team restored critical Navy network systems in the aftermath of Hurricane Ivan. They are (left to right) Andrew Tash (J513), Kevin Doll (J513KD) and Robert Mason (J513KD).

Photo courtesy of Kevin Doll

Hurricane Ivan's destruction at the power station.

The Navy reported that 90 percent of the buildings on the base suffered "significant" damage, but no one at the base was reported injured. The Navy's chief aviation training center, located at the base, was underwater and the Coast Guard station was destroyed.

Hurricane Season 2004 Hits Florida Hard

Hurricane	Landfall	Strength	Winds
Charley	Punta Gorda	Category 4	145 mph
Frances	Sewall's Point	Category 2	105 mph
Ivan	Pensacola	Category 3	130 mph
Jeanne	Vero Beach	Category 3	120 mph

Common Information Centric Security first SSC Charleston project to achieve Maturity Level 2

By Tonya Lobbestael
Editor, The Chronicle

Code 70's Common Information Centric Security (CICS) project achieved a Maturity Level 2 rating for the Software Engineering Institute's (SEI) Capability Maturity Model Integration (CMMI®) for Systems Engineering and Software Engineering on June 17. The project, under the direction of project leader Odette Foore (J70E), is the first SPAWAR Systems Center, Charleston project to achieve this rating.

CICS met the requirements for Maturity Level 2 in all seven of the CMMI® Level 2 process areas, as benchmarked by a Standard CMMI® Appraisal Methodology for Process Improvement (SCAMPI) Class 'A' appraisal, conducted by a member of the SEI. This rating means the process is managed according to CMMI® standards in the areas of project planning, project monitoring and control, configuration management, process and product quality assurance, requirements management, supplier agreement management, and measurement and analysis.

Photo by Harold Senn
Odette Foore, CICS project leader

The main challenge in achieving this rating, according to Foore, was to implement good systems engineering processes right from the beginning and to document completed activities and tasks. The CICS team used the command standard processes for all the Level 2 process areas, which are provided online via a secure website. In addition to the command's engineering process improvement policies and process manuals, visitors can also find standard operating procedures, online training and samples of documents including project plans and supplier agreements on the CMMI® site.

CICS is a $4.5 million Congressionally-funded project that was established to develop a hardware-based disk encryption device for the Department of Defense. In addition to meeting project requirements, the 20-member CICS team participated in numerous training sessions on command processes in order to develop sound engineering plans and processes for CICS.

Photo by Harold Senn
CICS team members: (back row, left to right) Will Marsh, Alan Dowd, Dan Shanholtz, Bob David, Yan Eide, Chris Fiest, Tormod Fjellgard; (seated) Jim Hughes, Odette Foore, OSD-ATL Sponsor Richard Lee, High Density Devices CEO Stein Aamot and Alte Haga (not pictured).

The first step in achieving Maturity Level 2 was to be designated as a command-sponsored pilot project through the Engineering Process Group. Then they began project planning. During that phase the CICS team interacted with stakeholders gaining commitment to the plan, estimated resources, set schedules and evaluated risk assessment.

They then moved into the configuration management stage. This involved developing a configuration management plan, identifying work products and putting them in a repository, and setting up a change control system.

Next came the hardest part, according to Foore – requirements management. "If requirements are added or dropped you must document and revise the project plan appropriately," she said. That includes adjusting the budget, time of delivery and other variables as necessary.

"You have what you call bi-directional traceable requirements," explained Deputy of Engineering Operations Mike Kutch (J09K). "In a nutshell, you have a requirement and in the end you need to test that requirement. If it's a requirement it should be tested, and if it's tested it should be a requirement."

The final three CMMI® process areas for Maturity Level 2 – measurement and analysis, supplier agreement management and process and product quality assurance are all equally important. Project managers use metrics in measurement and analysis to look at cost, schedule and requirements. The development of a supplier agreement management (SAM) plan in this stage is key

to working with contractors. Quality assurance reviews by an independent organization or person are also critical to gaining a Maturity Level 2 rating. And documentation at every stage is paramount to building repeatable and measurable processes, which is the point of systems engineering.

"Achieving this rating indicates that the command is progressing toward our overall command goal of achieving CMMI® Maturity Level 2," said Foore. The command plans to reach this level in 2005, and to reach Maturity Level 3 in 2007.

Since CICS achieved their CMMI® Maturity Level 2 rating, two other projects have achieved this rating. Code 66's Visual Information Display System (VIDS) project, led by Project Manager Steve Whitbeck, and Code 74's Automation Program, directed by Program Manager Ralph Shealy, achieved Maturity Level 2 ratings in all seven process areas. Several other projects are expected to achieve this rating in the near future.

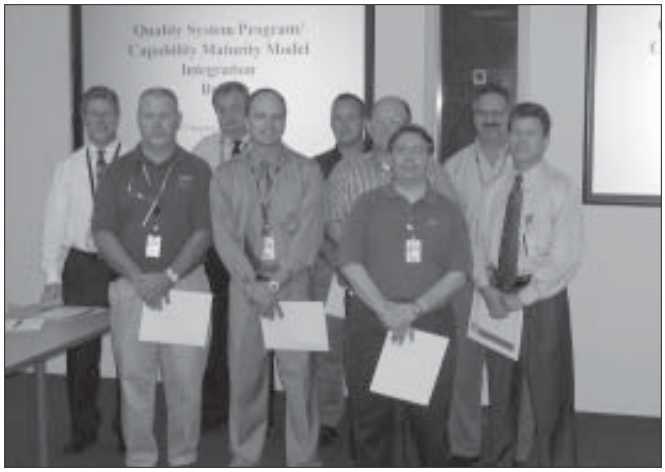


Photo courtesy of Mike Kutch

Code 66's Visual Information Display Systems (VIDS) project team members (front row, left to right) are: Russ Young, Steve Whitbeck, Jim Brogdon, Jamey Sanders, Rick DeForest; (back row) Philip Braswell, Gene Ladin, Dave Westbury, Jeff Israel; (not pictured) Rhett Myers

SSC Charleston strives for overall CMMI® Maturity Level 2

By Tonya Lobbestael
Editor, The Chronicle

SPAWAR Systems Center, Charleston has been actively pursuing process improvement in its engineering projects since 1998. As a result, the command initiated the use of the Software Engineering Institute's Capability Maturity Model Integration (CMMI®) for Systems Engineering and Software Engineering (CMMI® –SE/SW) in order to benchmark the implementation of best engineering practices.

Now SSC Charleston is working to achieve an overall CMMI® Maturity Level 2 rating, an accomplishment that verifies an internationally approved standard of management for engineering projects and programs, in 2005. That means a cross section of command projects must meet the CMMI® Maturity Level 2 requirements as determined through a Standard CMMI® Appraisal Methodology for Process Improvement (SCAMPI) Class 'A' appraisal.

"We want to become a world class engineering organization and stimulate Naval engineers to employ best practices," said Deputy of Engineering Operations Mike Kutch (J09K).

To reach this goal the command has established a process improvement organization, consisting of three groups. The Management Steering Group provides management direction to our process improvement efforts. The Engineering Process Group, which is made up of representatives from various departments, provides technical direction. And the Engineering Process Office develops the organizational policies and processes, and maintains them online at a secure website.

"Historically in this command the project engineers have done it all," said Mike Kutch. "They're the backbone of the organization. We want to give them some good processes so they can spend more time doing good engineering and working with the customer."

That is why the command has established process manuals, templates, sample documents and automated tools to assist engineers in implementing sound engineering practices and processes. A wealth of online and classroom training, and coaching from the process improvement team are also available.

"We want to become a world class engineering organization and stimulate Naval engineers to employ best practices."

Mike Kutch
Deputy of Engineering Operations

For more information on systems/software engineering, or to get a project designated as a command-sponsored project for CMMI® Maturity Level 2, contact Mike Kutch at (843) 218-5706.

Code 09C receives *ISO 9001/2000* certification

By Diane Owens
Strategic Planning Office

SPAWAR Systems Center, Charleston's C4ISR Acquisition Engineering and Integration (CAEI) became one of only a handful of ISO 9001/2000 certified federal organizations on Sept. 2. This certification was the result of a year's work for the newly formed Code 09C (formerly known as Corporate Production).

Photo by Harold Senn

Ryan Bell works on a rack for the GCCS-M program.

Although many commercial enterprises worldwide obtain ISO certification (see related story, next page), very few government agencies have been certified. SSC Charleston's Engineering Support Facility, Code 62, is the only other SPAWAR government facility to certify.

CAEI is led by Deputy Director Pete Van de Meulebroecke and Operations Manager Steve Lariviere. The facility employs over 80 people from their prime contractor FSC, A Stanley Company. Here, certified technical specialists assemble cables and racks. They also integrate cables and hardware onto racks and into cases. The racks and equipment cases are used by all branches of the military on ships, in submarines, in vehicles and tents. Employees also perform quality assurance testing of materials through finished products.

Currently, the production facility is working on projects involving cable manufacturing, integration, and material support involving 43 different delivery orders for more than 15 different sponsors. CAEI has performed work valued at more than $20 million in its first year.

Before CAEI opened in 2003, many SSC Charleston branches were running small-scale production areas to make cable and other items. This move consolidated production into one central facility, allowing for economies of scale, common processes and consistent quality.

Photo by Harold Senn

Cable fabricators making cables for CAEI customers.

Photo by Harold Senn

Glenn Mazyck installs cables on a CSRR rack.

Photo by Harold Senn
Albert Washington runs cables on the CSRR hull appliance.

What Is ISO 9001/2000 Certification?

By Diane Owens
Strategic Planning Office

Established in 1947, the International Organization for Standardization (ISO) is the world's largest developer of technical standards for all types of industry. The organization is a network of national institutes from 146 countries whose purpose is to coordinate, unify and standardize industrial standards.

ISO publishes international standards that organizations must meet in order to become registered (certified) under the ISO 9001/2000 standard, which is the current one.

ISO itself does not certify organizations, allowing third party registration agencies to perform formal audits and issue certificates. Typically, the registration agency performs a preassessment followed by a registration audit. The audit may take several days and consists of reviews of documents and policies, interviews with employees, production surveillance and inspection, etc.

When the organization passes the audit, ISO issues a formal certification letter and allows the company to display the ISO logo. Advantages of ISO certification include:

· Increased demand for products and services
· A visible indicator that the organization uses proven, credible, standard quality processes and a sound quality management system
· Potential reductions in customer complaints and significant reductions in operating costs
· Lower defect rate

Follow-up audits are performed every six months during the first few years of certification, and yearly audits are then performed. An ISO certificate must be renewed at regular intervals recommended by the certification body—usually around 3 years.

New lab helps protect America's way of life

By John Linden (J70J)
Critical Infrastructure Protection Center

Photo by Harold Senn

The new Critical Infrastructure Protection Center finds ways to share information with local, state and federal authorities during national emergencies and times of crisis.

In 2002 the White House clearly stated the importance of information sharing in times of crisis when it published the *National Strategy for Homeland Security*. This strategy lays out the critical missions needed to provide that security and emphasizes the importance of information sharing and analysis to deter, prevent, detect, warn, protect, respond, and if necessary, recover from attacks.

SPAWAR Systems Center, Charleston responded to this call by establishing the Critical Infrastructure Protection Center (CIPC). Working with private, local, state and federal organizations, the CIPC is identifying methodologies, processes and capabilities essential for information sharing and analysis throughout the nation. The goal is to ensure the availability, integrity, confidentiality and accountability needed to protect critical systems through a systems security engineering approach.

Information sharing critical to infrastructure protection

Critical infrastructure systems include emergency response, electric power, water, banking, telecommunications and several other infrastructure domains. Today, approximately 85 percent of the nation's infrastructure is owned by the private sector. The challenge is that each organization may have its own system of assurance and accountability. This means that realistic strategies and plans are essential for each organization and for all levels of government in order to respond appropriately during a national emergency.

Information Sharing and Analysis Centers (ISACs) have been established for most of the national industry sectors. These centers help reduce risks to industry by collecting and analyzing information pertinent to their business environment. ISAC analysts focus their efforts and assist industry to prioritize application of security resources by filtering information on threats and infrastructure vulnerabilities from the global environment.

To aid in this process, the CIPC merges knowledge and experience from three distinct disciplines to ensure appropriate pre-attack, trans-attack, and post-attack operations. By integrating information operations, infrastructure protection, and emergency management, the CIPC can identify and appropriately reduce risks posed by terrorism and other hazards. The CIPC focuses on intelligence transfer and information sharing processes to federal and state authorities. Activities include:

- development and implementation of efficient methods to identify critical infrastructure interdependencies and the economic impact factors
- collection of appropriate information stored in and communicated between a myriad of vastly disparate systems across the global information environment
- fusion and analysis of information
- dissemination of relevant information to decision-makers through the application of cognitive computing and neural networking

Emphasis on state perspectives

The CIPC documents select architectures, repeatable processes, and evolving/emerging technologies that can be transitioned and adapted by state and federal organizations. The CIPC emphasizes state perspectives to ensure each Governor can collect, fuse and analyze the information needed to substantially reduce risks associated with terrorism against the critical infrastructure. ***(continued on p. 13)***

New Homeland Security Operations Center provides real-time interactive connectivity

Compiled by Tonya Lobbestael
Editor, The Chronicle

On July 8, the Department of Homeland Security stood up a new state-of-the-art Homeland Security Operations Center (HSOC) to serve as the primary national-level nerve center for real-time threat monitoring, domestic incident management, and vertical and horizontal information sharing efforts. The HSOC was designed by SPAWAR Systems Center Charleston who, along with SPAWAR Headquarters and SSC San Diego, serves as the technical agent and systems command for the center and the Homeland Security Information Network (HSIN) programs.

Under the leadership of Code 74, SPAWAR assisted the Department of Homeland Security in the strategic planning, requirements engineering, design development and execution of the HSOC and the HSIN. The SPAWAR team was comprised of over 100 technical experts and tradesmen from all departments, SSC San Diego and SPAWAR headquarters. Together they managed the entire HSOC project from conception to commissioning.

Operating 24 hours a day, seven days a week, 365 days a year, the HSOC provides situational awareness and monitoring of the homeland, coordinates incidents and response activities, and issues advisories and bulletins to homeland security partners as well as specific protective and counter measure guidance.

As a single point of information integration, the HSOC maintains daily situational awareness on the security of our homeland and coordinates activities with other departments and agencies. Today, the HSOC is operational in an expanded watch floor with updated and integrated technology. The cornerstone of the HSOC is its ability to share threat information and provide real-time interactive connectivity with Governors, Homeland Security Advisors, law enforcement partners and critical infrastructure operators in all 50 States and more than 50 major urban areas through the Homeland Security Information Network.

The HSIN system was launched on February 25 of this year with all states receiving connectivity by July 2004. The Internet-based counterterrorism communication tool is encrypted using a secure network that includes a suite of applications including mapping and imaging capabilities. HSIN makes it possible for threat information to be exchanged with state and local partners at the Sensitive-but-Unclassified level. Future program expansion will include linking additional cities and counties, communication capabilities at the classified SECRET level, and increasing the involvement and integration of the private sector.

"This Administration is committed to information sharing. It is essential to keeping our nation safe and secure," said Homeland Security Secretary Tom Ridge during the HSOC opening ceremony. "The Homeland Security Operations Center synthesizes vital threat related information and strengthens coordination and communication among numerous agencies and homeland security partners."

New CIPC lab ***(continued from p. 12)***

Specifically, the CIPC is focused on:

- developing architectures for information sharing and analysis centers describing local, state and national information sharing, and designing the associated databases
- incorporating academic research and experience on evolving information sharing theory and leveraging knowledge management programs
- working with state authorities to establish a model state-level ISAC in South Carolina
- operating a National Guard at SSC Charleston
- defining processes for sharing private, local, state, and federal information
- defining technology fusion methodologies by identifying, testing, and incorporating emerging technologies
- baselining configuration management for operational ISACs and leveraging cyber, physical, and biometric security systems and sensors

The ultimate goal of CIPC is establishing associated processes and practices that will provide an element of security for protecting the nation's way of life.

Photo courtesy of CHIPS Magazine

Brian Tamburello, a new professional on the Networks, Technical Specifications, Acquisition and Technical Support Team, prepares a FORCEnet demonstration.

Tidewater demonstrates FORCEnet Composeable Environment

By Nancy Reasor, Asst. Editor
CHIPS Magazine

The first demonstration of the developing FORCEnet Composeable Environment (FnCE) took place on Aug. 17 at SPAWAR Systems Center, Charleston's Tidewater FnCE facility at the Norfolk Naval Base, and Sen. George Allen (R-Va.) was on-hand to see it.

Capt. John W.R. Pope III, commanding officer of SSC Charleston, briefed Sen. Allen concerning the mission of SPAWAR to "deliver FORCEnet to the joint warfighter through the development, acquisition and life cycle support of effective, capable and integrated command, control, communication, computer, intelligence, surveillance and reconnaissance (C4ISR), information technology and space systems."

Composeability is a premier requirement for the joint warfighter, particularly in the areas of tactics and doctrine, joint organizations and capabilities. SSC Charleston personnel are developing the Tidewater FnCE (pronounced "fence") facility to provide a collaborative environment for all the military services to perform interoperability testing, simulation, evaluation and demonstration of new technologies. The development of joint collaborative facilities fills a significant need that exists for all U.S. and coalition forces.

The genesis for the FnCE started approximately three years ago when Jennifer Watson (J80) was assigned to the V-53 facility. She recognized the need for a leading edge technology demonstration facility to showcase FORCEnet to the Hampton Roads' military community. Serita Hunt (J812), who is now assigned to provide critical support to NETWARCOM, served as program manager, pulling together specialty expertise from within the command. Senior C4I Systems Engineer Tom Calogrides (J84) was the design engineer who refined the conceptual design and added the realism of a modern Command and Control Center. FnCE engineers are now prepared to demonstrate emerging technologies that will benefit the joint warfighter in both the training environment and in the war zone.

The Tidewater FnCE is connected to a FnCE network grid that provides a portal to facilities located at SPAWAR Systems Center Charleston, SPAWAR Systems Center Charleston at St. Julien's Creek, SPAWAR Systems Center San Diego, Naval Network and Warfare Command (NETWARCOM), the Joint Battle Center (JBC) Suffolk, Va. and multiple labs at Commander, Atlantic Fleet.

Capt. Pope provided Sen. Allen with the demographics of SPAWAR employees in Virginia and information about some of the financial aspects of the SPAWAR enterprise. He informed Sen. Allen that SPAWAR is the first federal agency to receive an outstanding rating for Small Business Administration compliance (see related story p. 5). He also discussed the initiative to transform a 60-year-old landmark facility on the Naval Station Norfolk into a state-of-the-art resource for the warfighter.

Plans are being formulated to host a formal ribbon cutting ceremony in the early part of FY05 to introduce the new SPAWAR capabilities to the Hampton Roads' military and political communities.

Photo courtesy of CHIPS Magazine

Sen. George Allen (R-Va.; second from right) discusses joint warfighter support.

Naval Reserve website consolidation largest in DoD

By Tonya Lobbestael
Editor, The Chronicle

The Naval Reserve has a new way of doing business on the World Wide Web thanks to a new two-tiered public and private network site designed by SPAWAR Systems Center, Charleston's Code 311. The new site, which replaced all 550 existing Naval Reserve sites, is the largest website consolidation in the Department of Defense (DoD) according to representatives of Microsoft®. The Naval Reserves are also the only force in DoD that has consolidated all of their websites.

The Naval Reserve Web Site (NRWS) utilizes Microsoft® Contribute allowing content authors and editors at each Naval Reserve command to develop their own pages while maintaining overall site continuity and security. NRWS incorporates a public side that is accessible to anyone through the Internet and a private side accessible only to members of the Naval Reserve via a secure log-in. The site has the capacity of supporting 3,000 Reserve units in its environment, and to date has saved the Naval Reserve Force an estimated $9 million.

"When we had our initial conversation with the Reserves we thought, 'We can't do this because we only have four months and there are only three of us'," recalled Hank Winter (J311), developer of the system. "Having such a small team caused our thought processes to be more creative to save both labor and time. It pushed us to automate lots of processes so we could focus on what needed to be built." SSC Charleston initially had to architect equipment, perform testing and evaluations to field the site in a short timeframe.

There were two keys to the initial site consolidation according to Winter. Both contractors on the team, Luis Vega and Richard Floyd of CSSI, attended training to become Microsoft® certified developers. The other key was bringing Microsoft® in as a consultant at the beginning of the project.

Part of the beauty of the site, according to Winter, is the variety of authors that can work on site content. "This site has really empowered doctors, aviators and others to manage their content," he explained. Authoring content requires no computer programming skills on this site – just the ability to use a template. There are also checks and balances as each command must have an editor that approves the page prior to posting and an administrator who verifies user accounts. Currently there are about 1,200 authors and editors that can update pages daily.

Photo by Harold Senn

Hank Winter and Cdr. Dale Drake (foreground), Naval Reserve Forces Command, worked together to build a new website that consolidated 550 Naval Reserve sites.

In May a major upgrade that included hardware and software upgrades, security enhancements and significant design changes was completed. The site is now hosted on a fault-tolerant server farm comprised of approximately 18 servers, search engines have been added, and the system now uses Microsoft.Net® which allows for building future applications and snapping them in. The Reserves also established a centralized Help Desk that is operated by Reservists, with SSC Charleston providing their tech support.

Future plans include building an application for reservations for berthing and moving the entire site over to NMCI within the next two years. The long-term plan is to transfer responsibility for NRWS to the Commander Naval Reserve Force (CNRF) Web Services Team.

"Eventually I intend to work myself out of a job," joked Winter. But he just might find his team more in demand than ever. Talks are currently ongoing with other potential customers. "By building this site through SPAWAR," concluded Cdr. Drake, "the knowledge can be used by other military and government organizations." That fact has both the Reserves and SPAWAR Systems Center Charleston excited and looking to the future.

Just *like* Jonesy

Finding enemy submarines was almost a lost art, but today these anti-submarine warfare experts are teaching a new naval generation to be

Photo by Harold Senn

Truett Stone heads up the FTAS lab and trains young sailors to identify submarines by sound.

By Tonya Lobbestael
Editor, The Chronicle

Photo by Harold Senn

Terry Webster reads a visual display that shows acoustic "pings" during a recent reconnaissance mission.

The racks of equipment seem endless. The technology is rather mind-boggling. And the skill – and luck – it takes to identify a submarine by sound seems just out of reach for the average human being.

But then Truett Stone (J61A) puts on the headphones just like Jonesy did in "The Hunt for Red October" and amongst all the background noise you hear him say, "There's one, and it's Russian."

Anti-submarine warfare was almost a lost art in the U.S. Navy. For several years after the end of the Cold War, the perceived threat of enemy submarines in U.S. waters or areas of interest was not as high as it once was. And so, the black art of hunting submarines and the men that were trained in that art faded into the distance.

But that is no longer the case according to Stone, project lead for the only Fast Time Analyzer System (FTAS) lab in the Navy – one of only a handful of FTAS labs in the world. While today's most immediate threats might not come from the former Soviet Union, there are over 35 countries that have submarine fleets, and not all of them are our friends.

It's Stone's job, along with the FTAS team at Patuxent River Naval Air Station in Maryland, to find them. Together, these technical specialists have a combined total of over 200 years doing just that by listening for the distinct sound only a submarine can make underwater.

"Everything has a unique sound fingerprint to it," said Stone. "I can compare it to listening to a Ford versus a Chevrolet or listening to a Cadillac versus a Yugo. We're taught through our training in the Navy how to listen – how to analyze the sound – and our equipment takes the sound recorded by the sonobuoy and puts it in a visual display."

But first the sonobuoys have to get in the water to record the sound data. Submarine hunting is really a joint mission between SPAWAR Systems Center Charleston and NAVAIR. The FTAS lab work hand-in-hand with the P-3 aircraft and its crews planning missions, supporting the planes while they are in the air, analyzing the data and performing mission reconstructs.

The P-3 takes off and heads to the area designated for the mission. It drops multiple sonobuoys in a grid pattern in the target area. The operator on board the plane listens for pings throughout the mission, which can last up to 12 hours.

Photo by Harold Senn

Acoustics expert Roy Hokrein (foreground) conducts a mission reconstruct to make sure all enemy submarine targets were found during a recent P-3 mission. Reconstructs are essential to training and verifying accuracy of operators in the field.

At the same time the sonobuoys are transmitting data to a large "black box" that contains 31 receivers with 32 channels each.

Once the data is recorded and the mission is complete, the one-inch magnetic tapes are brought to the FTAS lab for active multi-static post-flight analysis, where the tapes are played 16 times faster than real time. The analysis includes an acoustic display of the data that looks like a bunch of squiggly lines to the untrained eye. But to the guys in the FTAS lab those displays indicate submarines, whales, and several other things found under the sea.

"It all has to do with what it sounds like, what it looks like, and what environment you're in," said Operator Roy Hokrein. "Sometimes it's just a gut feeling. This is a black art and you can't train a computer to find these subs."

That's the real reason why the FTAS team puts so much effort into training operators in the fleet and doing mission reconstructs. For every anti-submarine warfare mission flown they spend several days reconstructing the mission to make sure all the targets were accurately identified.

"When we do a reconstruct we're seeing how well they did," said Stone. "Did they miss contact, were contacts accurate, did sensors work as predicted?" This process helps identify operators who may need additional training, and provides valuable information to the Fleet. Reconstructs also give information on what to expect from various types of sonobuoys in different environmental and weather conditions.

Each time the FTAS team does a system install, upgrade or maintenance, they teach operators more about the fine art of submarine hunting. They have written course curriculum and trained instructors on how to teach anti-submarine warfare at the Navy's school house in Dam Neck, Va.

The FTAS team does all the site support for the system throughout the Navy. They provide technical support for operators in the Fleet and maintenance troubleshooting 24 hours a day, seven days a week. They also support all NATO maritime patrol aircraft.

Most days this team works pretty long hours according to Stone, and they're often flying around the world to accomplish their mission. So why do they do it? Because they understand how hard it is to identify subs, and how important it is to train a new generation to be just like Jonesy.

Tactical Support Centers keep reconnaissance missions on target

Photo by Harold Senn

The Tactical Support Center team at Patuxent Naval Air Station in Maryland supports P-3 reconnaissance missions by identifying targets, interpreting data and transmitting intelligence for decisive action on the battlefield.

By Tonya Lobbestael
Editor, The Chronicle

Three labs. One mission. To find the bad guys when the P-3 flies. That's what the components of the world's 14 Tactical Support Centers do.

Composed of a tactical support lab, a Fast Time Analyzer System (FTAS) lab, and a communications lab, Tactical Support Centers can identify targets with imagery, radar or acoustics, and transmit that information immediately up the chain of command for decisive action on the battlefield.

Photo by Harold Senn

Robert Coombs (seated) and John Kelly prepare data for transmission in the TSC communications lab.

The tactical support lab deals with visual, radar, optical sensor and infrared data. The FTAS lab analyzes acoustic data and creates a visual output to help identify targets (see related story on p. 16). And the communications lab can transmit to aircraft, ships, land base stations and Mobile Operational Command Centers, also known as MOCCs.

"Wherever a P3 goes there's got to be a TSC," said Truett Stone (J61A), project lead for the FTAS lab at Patuxent Naval Air Station in Maryland. "Without us the aircraft would go out and fly around and collect all this data, and there'd be nowhere to send it and nothing they could do with it."

The TSC does all pre-mission planning, mission and in-flight support, and post-mission support for the aircraft. That includes providing the briefing materials for the P-3 crew, dealing with visual, radar, infrared and other types of data, and transmitting that data via secure channels.

A similar configuration is often found in MOCCs. "The MOCC unit is really a TSC in a suitcase," said Stone. These scaled-down versions of the TSC can be deployed wherever a TSC is not available. "MOCCs are very important in increasingly mobile battlefields and with multiple missions around the world," he added.

Today's TSCs and MOCCs support P-3 missions flown over land and over water. In the future they will support increasingly complex missions flown by the Navy's new Maritime Multi-Mission Aircraft (see related story, p. 19). And though they're always in the background, the people at the TSC understand the importance of their jobs.

As Stone said, "Without us the P-3 couldn't do its mission."

Tactical Support Center enters new era

By Tonya Lobbestael
Editor, The Chronicle

The idea of a Tactical Support Center is nothing new. In fact, the configurations used in the 14 TSCs that exist worldwide – Fast Time Analyzer System (FTAS) lab, TSC lab and communications lab – has been around since the late 1960's when they were developed to support the P-3 aircraft's submarine hunting mission. But times and technology are changing, and today's Tactical Support Centers and Mobile Operations Command Centers reflect those changes.

For years the core competency for the TSCs was supporting the P-3, but that 30-year-old plane will soon be replaced by the Maritime Multi-Mission Aircraft (MMA) recently approved by the Navy. The MMA will fly missions over land and water, utilizing satellite communications and a wide variety of sensors including acoustics, infrared, and optical that transmit in real time instead of just recording data.

Photo by Harold Senn

Kathleen Wood checks operation of an optical sensor mounted on the P-3 in the tactical support lab.

"It's going to be a new era," said Truett Stone (J61A), project lead for the FTAS lab at Patuxent Naval Air Station in Maryland. "It's going to bring a lot of new work our way."

SPAWAR Systems Center Charleston's Tactical Support Center team is gearing up for the challenge. Their development lab is constantly improving, testing and developing new software to push the latest technology out to the fleet, and they are actively moving through system refresh and install cycles every 18 months.

Photo by Harold Senn

Roy Hokrein uses active multi-static, an active acoustic system, to find enemy submarines in the FTAS lab.

Most recently the TSC team conducted developmental testing for 4.X GCCSM (global command control system maritime) in Jacksonville, Fla. This system, which is slated to go Navy-wide, provides operators with situational awareness of what's going on anywhere in the world offering command and control of all forces and the entire fleet.

They are also participating in Foreign Comparative Testing (FCT) that comes directly from Congress and is funded by the Secretary of Defense. Originally 24 proposals for the FCT program were accepted from the Department of Defense, five of which were from the Navy. Two of the Navy proposals accepted were submitted from SPAWAR. The SSC Charleston proposal is for testing to find a replacement system for the Fast Time Analyzer System.

"Our FTAS system is about 15 years old," said Stone. "It's still doing the job but it can't support the new sensors that are coming out. They don't make the system anymore. They don't make the parts anymore. So what we're doing is we're looking at other possibilities." In August the TSC team tested a Canadian system and they plan to test other systems in the near future.

With approximately 30 civilians and another 30 contractors, this team is always focused on keeping fleet intelligence and communications on the cutting edge. "We're constantly talking to the fleet operators to find out what they need, and we're always looking for ways to make the products better and more user friendly," said Stone.

Successful netCentric T&I demonstration leads to

TRANSFORMATION

By Rebecca Rowsey
SSC Charleston Horizontal Fusion Program Manager

SPAWAR Systems Center, Charleston demonstrated their netCentric testing and integration in the command's new Test & Integration (T&I) lab during Quantum Leap 2, held at the main engineering center on Aug. 11. The conference that brought together Horizontal Fusion representatives from all areas of the Department of Defense showcased several new netCentric capabilities.

NetCentric testing and integration began in earnest at SSC Charleston in May 2004, and the command quickly established the T&I lab. This facility provides an environment to measure integration of new netCentric services for warfighter and business mission areas.

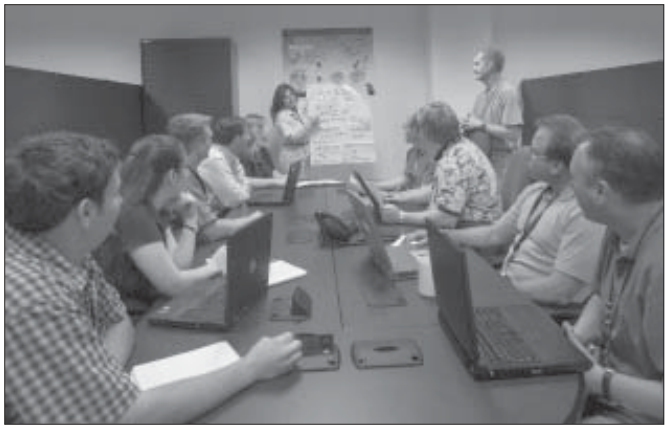


Photo courtesy of Rebecca Rowsey

Rebecca Rowsey (standing) plans the netCentric Test & Integration demonstration with Horizontal Fusion team members.

NetCentricity means providing an information advantage (enhanced information sharing, improved shared situational awareness, better knowledge of commander's intent) that can be turned into a warfighting advantage (faster self-synchronization, speed of command, increased combat power). Horizontal Fusion's role is to help ensure data is available on the Global Information Grid for those who need it, when they need it, anywhere they need it.

The T&I lab team groups new Horizontal Fusion initiatives to ensure testing and integration is appropriate to the initiatives' roles. The process starts when the initiative submits its software code, installation instructions, test plans and other related materials needed to accomplish functional, integration, and security testing. This data is stored in the Concurrent Versions System (CVS) that provides the means for the T&I Lab personnel to maintain configuration control.

The Designated Approving Authority (DAA), called for by the DoD Information Technology Security Certification and Accreditation Process (DITSCAP), reviews the Systems Security Authorization Agreement (SSAA) and the initiative's in-house testing to determine if the program is mature enough to enter testing. Once approved, testing begins.

Lab testers install a clean copy of the Horizontal Fusion Mars Portal (user entry point to Horizontal Fusion capabilities) and the initiative's code on a "clean" test station. The initiative's functions are tested based on the use cases submitted in the test plan and with use cases developed by the T&I Lab. If these tests are successful, then the initiative's code will undergo integration testing.

Integration testing – the next phase - involves installing an initiative's code onto the test portal and verifying that it performs in accordance with the application's operating instructions, and that it satisfies the mandated security requirements. During this testing, the team looks for interoperability problems as well as any other conflicts. Security testing is then done to support an interim approval to operate or grant an approval to operate on SIPRNET, a secure network from the DAA.

The final step is stress testing, which is accomplished on the portal to benchmark the performance of this configuration of the portal to assist planners in properly scaling it to support expected user loading under varied operational conditions.

The goal of Horizontal Fusion's test and integration process is to move new netCentric capabilities to the operational Mars Portal Server on SIPRNET at DIA as quickly as possible so that capabilities can be accessible to warfighters. Having a netCentric test and integration process and expertise in place provides a knowledge base and capability that enables the command to be a "go to source" to facilitate other netCentric programs and other transformational services.

SPAWAR Europe Supports RESCUER/MEDCEUR 2004

By Chris Rynearson (J571)
SSC Charleston, Europe

In July, SPAWAR Europe technicians provided communications expertise for *RESCUER/MEDCEUR 2004* (RM'04), a multinational exercise that took place in Latvia, Lithuania, Estonia and Bulgaria.

RM'04 is a US Army Europe (USAREUR) led "In the Spirit of Partnership for Peace" computer aided simulations exercise designed to train US, NATO and partner nations to respond to mass casualty/disaster relief, anti-terrorism, search and rescue and humanitarian assistance scenarios.

Becky Clark Thomas (J571), Chris Rynearson (J571), Dave Arellanes (J571) and Joel Fauth (SSC Charleston, Pensacola) were among the SPAWARiors who provided WAN/LAN communications, VTC operations, and Help Desk support for exercise participants.

Planning for the communications support began a year ago, with SPAWAR Europe project engineers meeting with USAREUR, US European Command (USEUCOM), and host nation planners. Requirements were gathered and refined during site surveys and three planning conferences.

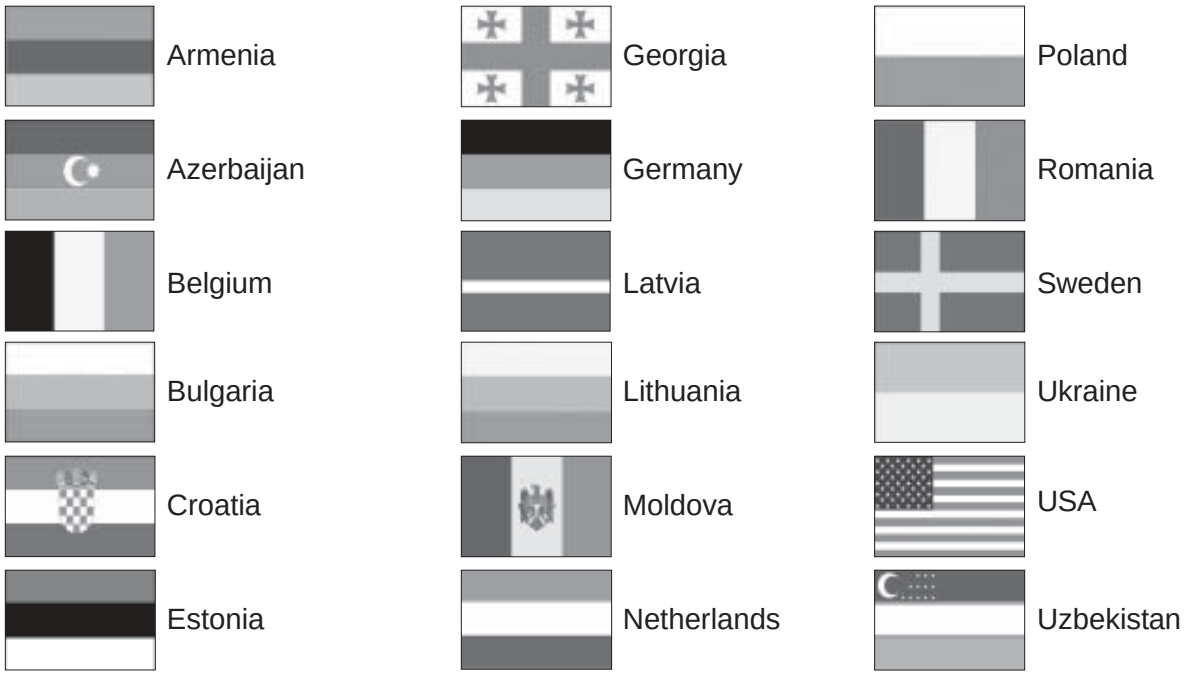
SPAWAR Europe was responsible for engineering and designing a commercially viable WAN capable of supporting JCATS (computer simulations), MEMS (Web-based scenarios/scripting), VTC, Voice over Internet Protocol (VoIP) and regular Internet access. What developed was a business class DSL architecture as the primary solution, and an ISDN solution as the backup.

During the actual exercise, SPAWARiors supported the WAN and VTC communications and backfilled other IT support functions ranging from computer/desktop support, VTC scheduling, network administration and web development.

One innovative and cost saving step that SPAWARiors made was to utilize Skype™, a commercial VoIP software application that provided secure (128 bit encryption) voice and chat capabilities. By utilizing this free software with a standard headset, exercise managers were able to significantly reduce cellular/POTS telephone charges.

SPAWAR Europe is already tasked to participate in RM'05, and planning is well underway.

RM '04 Participating Countries



Speedy support for troops at Guantanamo Bay

By Patrick G.. Koehler (J811) and John McLaurin, Jr. (J811)

SPAWAR Systems Center Charleston's Code 80 encourages employees to seek new opportunities, face challenges and overcome difficulties to successfully support the warfighter. Our opportunity came when the Technical Specifications and Acquisition Branch (J811), learned that troops in Guantanamo Bay Cuba (GTMO) were looking for help to set up an Internet service for several cyber cafés operated by Morale, Welfare and Recreation (MWR). We discovered from the Joint Task Force (JTF) J6 that Internet service to support Dialpad, an inexpensive Voice over Internet Protocol (VoIP) service on MWR computers, was abruptly discontinued because of heightened security policies on the Defense Information Systems Agency (DISA) network.

As a result, the JTF commander received numerous complaints because military personnel had been using Dialpad to call home. Forced to use commercial service, the troops were spending up to $1.20 per minute to phone loved ones.

Using Dialpad is simple. From the Internet, military personnel can just log on and easily establish an account using a credit or debit card. To restore morale, JTF knew it had to restore Internet service so it investigated purchasing a commercial satellite link.

Little time, lots of security

The JTF commanding general needed an Internet satellite service that would provide Dialpad service to 150 users for several cyber cafés linked by fiber—and by Memorial Day—if possible. The JTF requested a 3Mbps download link with a 768Kbps upload speed along with future expansion options to increase speed to a maximum of 10Mbps.

Two experienced technical specialists, Patrick Koehler (J811) and John McLaurin (J811), were soon on-site to identify and secure a satisfactory source and expedite installation. Using a GSA contract, we purchased and supervised installation of a satellite ground system, along with Internet Service Provider (ISP) services from G2 Satellite Solutions Company.

With the detainees aboard GTMO, the security level is high and uncompromising. The Air Mobility Command was the only mode of transportation in and out of GTMO, and there were only two flights per week. There were serious communication, planning and logistic challenges throughout the project, along with unexpected shipment delays and complex security constraints that made this project extremely difficult.

Connection ahead of schedule

Despite the challenges, J811 established satellite service for GTMO within 39 days from the initiation of the project—way ahead of initial 60-day estimates. JTF J6 Department Head Lt. Col. Dan Nickerson said the troops are very happy with the new Internet service and that they are able to phone home more often.

An article by Army Maj. McGehee in the JTF newsletter, *The Wire* from June 25 showed a picture of Army Brig. Gen. Jay W. Hood using Dialpad.

Brig. Gen. Hood said, "The service allows troopers to make calls to home for as low as 3 cents a minute."

We would like to thank the support staff at GTMO who helped us provide this service to GTMO warfighters and their families. In Code 811 we continue to look for more opportunities to support the warfighter.

SSC-C connects in South Korea

SSC Charleston support provides tactical data link for Korean TADIL architecture improvement

By Dave Osborne (J534) and Richard Mahlie (J534)

When the Electronic System Command (ESC) at Hanscom Air Force Base was assigned the Korean TADIL Architecture Improvement Program (KTAIP) they had a problem. To meet their goal of improving the incoherent tactical picture that existed in the Korean theatre, they needed a solution that provided track correlation capabilities and a tactical picture amongst the redundant radar coverage of the Korean peninsula.

That's where SPAWAR Systems Center Charleston came in. The command provided the assets to enable simulated data feeds that included the Air Defense System Integrator, Tactical Data Link Simulator and Radar Simulator.

By implementing a distributive engineering environment SSC Charleston was able to provide the tactical data link feeds remotely from Charleston to the system under test at the base via the Defense Information System Network and DSN phone lines. This enabled testing while reducing substantial TDY and shipping costs.

Once the scenarios were written and the distributive engineering environment was established, SSC Charleston supported several weeks of testing. Upon successful completion of the testing, Hanscom Air Force Base selected the Multi-Source Correlation Tracker (MSCT) as the solution for providing track correlation capability and tactical display of the air picture for the Korean peninsula.

ESC then asked the command to help with S-TADIL J (satellite Link-16), which was also a part of KTAIP. Code 534 tested the two proposed systems and recommended which system should be selected. Working with Scientific Research Corporation, the team wrote a plan to test every aspect of the data link. They also partnered with SSC San Diego to complete tests that resulted in major software improvements.

When the time came to implement and install the S-TADIL J capability at Osan Air Force Base in Korea, SSC Charleston developed the architecture and tested the proposed solution. This solution provided an engineering challenge due to separation between JRE, the radio and the antenna. But the team devised a remedy and conducted the successful system installation, testing and training.

Just when it seemed the project was complete, ESC called again. They needed a way to "tap" off the signals of the twenty Republic of Korea Air Force air defense radars at Osan Air Force Base for use by the MSCT.

Although the assistance required was not related tactical data links, ESC requested SSC Charleston to evaluate their proposed solution. When deficiencies were found in their solution, they asked for a workable design. The team demonstrated a successful solution, and performed the installation and testing at the air base.

The command's success was due to cross code collaboration. Chuck Davis, Robert Varnes and JR Sawyer (J70); Dennis Gette and Mike Massenett (J60); and Rick Mahlie, Steve Burchette, Abe Palihan and David Osborne (J50) provided invaluable contributions to the KTAIP testing.

Connecting Graduates with deployed parents

Myra J. Rice (J77)
SSC Charleston, National Capital Region

Deployed service members often miss birthdays, anniversaries and holidays. But imagine missing your child's high school graduation.

The Department of Defense Dependent Schools (DoDDS) Europe officials wanted to make sure parents did not miss this milestone, so they turned to technology and teamwork. They developed a partnership with SSC Charleston, contractors and volunteers to set up a live Internet broadcast of ceremonies from 14 DoDDS high schools to soldiers in the Army's 1st Infantry Division in a new effort to keep families connected during graduation events.

US Army Europe (USAREUR) Commanding General B.B. Bell convened a joint task force to support the DoDDS initiative. The Army's 1st Infantry Division was selected for the initial broadcast effort. Active duty parents in this unit had at least one son or daughter graduating from each of the 14 schools involved.

A plan was developed to broadcast the 14 ceremonies live to the desert, but a two-way video teleconference broadcast was not feasible because of the large number of schools involved and the three-day window during which the ceremonies were held.

1st ID/HQ asked Jerry Dowdy from SPAWAR Systems Center Charleston, National Capital Region to develop a web front end for the initiative. It needed to be customized to be based on the login credentials of the visitors.

Photo courtesy of Myra Rice

Deployed parents watched their children graduate via customized online broadcasts.

Although the initial request was only for the video stream, Dowdy saw a way to customize the layout of the page to reflect the high school colors, mascot, place and time of graduation.

Because Dowdy had never attempted this type of project, SPAWAR NCR sent him to training to learn the technology. Dowdy learned how broadcast suites push their native content onto a network which can be converted to another format and then redistributed via a .sdp file.

This initiative made it possible for countless families and community members to share in their childrens' graduation ceremonies. Working together the team members from DoDDS, USAREUR and SPAWAR succeeded in providing a flawless operation. More importantly, they succeeded in bringing families together for a very special event.

Photo courtesy of Lisa McDade Bonnaure

Lisa Bonnaure (J77), Dr. Jean Silvernail (OSD), Rear Adm. Ken Slaght and Jerry Koenig (J70) collaborated to add the *United through Reading* section to www.militarystudent.org.

Admiral Helps Military Students

By Lisa McDade Bonnaure (J771)
SSC Charleston, National Capital Region

Rear Adm. Kenneth Slaght, commander SPAWAR and Dr. Jean Silvernail from the Office of the Assistant Secretary of Defense recently put their heads together to help military students.

Dr. Silvernail and SPAWAR Systems Center Charleston, National Capital Region worked together to build a new Website to help military children through transitions and deployments. The site name is www.militarystudent.org.

Rear Adm. Slaght suggested featuring a new program that allows deployed sailors to record themselves reading stories to their children. The program, which is sponsored by the Family Literacy Foundation, is now featured on the site under *United through Reading*. By reading to a loved one, deployed personnel stay connected and share a meaningful moment with their child.

Take a number

Life cycle management approval, tracking required for all IT resources

By Tonya Lobbestael
Editor, The Chronicle

Information technology is part of almost every project and program at SPAWAR Systems Center Charleston. Without IT resources engineers could not design, technicians could not install, and there would be nothing to test. And without the Life Cycle Management program, there would be no management or tracking of those IT resources as required by the Clinger-Cohen Act of 1996.

The Act, which was passed to insure management oversight of IT acquisitions, mandates that IT investments and support mission requirements are interoperable, cost effective and reduce risk. The result is significant changes in the Department of Defense's approach to IT resource management and acquisition. Under DoD 8000.1, all DoD components must use a disciplined life cycle approach to manage information resources from acquisition through their retirement.

Photo by Harold Senn

Christi Solivan, Carrie Evans, Joe Weed, Latina Gissentana and Jack Folley plan Life Cycle Management training efforts.

It also affected the way SSC Charleston does business. All IT acquisitions must be approved by LCM or management prior to purchase, and each purchase must have an LCM tracking number assigned. That means every piece of IT equipment, software and services – including maintenance and supplies – must go through the LCM process. The exception is consumable supplies such as computer disks or toner, some video equipment, and those goods and services provided under NMCI.

But the process is not at all difficult according to Latina Gissentanna, team lead for the Office of Information Technology Approvals (J09B2). LCM numbers can be assigned for individual purchases or for the life of an entire program. The program or project manager simply submits documentation authorizing the tasking along with copies of all program funding documents to the LCM team. All project purchases then use that same number. The purchase is reviewed for approval and the number is issued.

Code 09B2's LCM team, which includes Joseph Weed, Jack Folley, Christi Solivan and Carrie Evans, is currently working to make sure all existing programs and projects have received LCM numbers. "We're not being punitive," explained Folley. "We just want to fix the programs we've got and create new ones the right way."

To make the process smoother, the LCM team has shortened number assignment times for new programs to less than two hours, and to just 30 minutes for delivery orders. They have developed the Life Cycle management Expenditure and Tracking System, or LETS, database, and they review all delivery receipts, BOMS and purchase cards to help procurement originators identify purchases that require an LCM number.

(continued on p. 27)

What's in *your* ATTIC?

By Dr. Stephen M. Jarrett
Chief Technologist, Code 70E(SJ)

There are numerous research and development organizations that are turning out new technologies daily. At SPAWAR Systems Center Charleston, we owe it to our customers to be knowledgeable of these technologies in order to make recommendations for technology insertion and to provide new capabilities.

The Advanced Technology Transition and Implementation Center (ATTIC) concept was designed to provide a focus on the transition of emerging technologies. SSC Charleston's ATTIC includes briefs on emerging technologies and innovative concept papers. It is available online via SSC Charleston's secure internal website. Inputs are being accepted from all codes.

Technology priorities and knowledge management

In order to maximize the benefit from our search for emerging technologies we must designate some technology priorities. Many of our customer organizations already have technology priority lists. Their focus should influence ours, but they are not necessarily identical. Our goal should be to give all of our customers the best technical solutions available. To do this we need input from all of the technical codes to set these priorities for the command.

Where do we get the emerging technologies that are required to upgrade our existing systems and to put together new capabilities? The short answer is, "we must actively go find them." That is a key aspect of the ATTIC concept. Technology priorities are posted on CorpWeb to guide your current search. These priorities are updated regularly.

If we only knew what we know at SSC Charleston, we'd be much more productive. Our organization has technical expertise in many areas. By identifying the technical experts in each area we can actively push information to them when emerging technologies in their areas are found. This will ensure that they are aware of new technology developments in their areas of expertise. They will also be called upon for technical input to concepts and proposals that overlay their expertise areas. This will be the beginning of "virtual proposal teams" to quickly respond to data calls and customer technical challenges.

Concepts and proposals

Even with active technology search and the knowledge management of the results, ATTIC will never be effective without the final phase of the program. That phase is the development of concepts and proposals to implement the

technologies and to transition them to our customers in the form of advanced prototypes for the development of concepts of operation. Unlike product development, advanced technology development doesn't start with a well defined product with specifications for everything from capability to power requirements. In advanced technology development the customer may not even know how to use the product when it is presented in prototype form. That pushes the need for field level prototypes that can be deployed to the user in real scenarios to develop the concept of operations. Many of the proposals are unsolicited based on the technologist's ideas for existing system enhancement and for leapfrog new capabilities.

The problem with many concepts is that funding usually comes from "real" programs not conceptual programs. Many research and development organizations dwell in this conceptual area and expend vast sums of R&D funding to develop prototypes to prove that technology concepts actually work. The gap is that concept prototypes generally aren't hardened enough or in the form to be put into the field to develop the concept of operation required for adoption of the innovation. ATTIC fills the gap between the R&D organization and the user community by collecting the emerging technologies, developing the concepts for adoption and producing the prototypes necessary to field test the units. This involves more that just technology. It also involves the business analysis to address the primary users, the development of user scenarios and the necessary contract and funding lines.

Conclusions

ATTIC is dependent upon a number of processes for success. First, we must keep in touch with the R&D community to follow the emerging technologies as they come out of the government laboratories, industry laboratories, and small company developers.

Second, we must be up close and personal with our customers from blue water Navy to the Special Forces and the Homeland Security groups. We must be able to conceptualize the use of technologies as we find them. This requires foresight and knowledge of the operations of our customers.

Finally, we must be active in finding a home for technologies that we find. There is no guidebook for inserting technologies. There are, however, many nay sayers who continually say it can't be done. In Hamel and Prahalad's book, "Competing for the Future", the advanced technology developers are called "wild ducks". These wild ducks are the out-of-the-box thinkers that move the disruptive technologies to the marketplace in spite of all the odds against them. Every organization needs these wild ducks to compete in the future. The companies without these leading edge thinkers are generally called bankrupt.

Life Cycle Management
(continued from p. 25)

LCM tracks programs and IT thresholds and expenditures – not contracts. "The funding document is absolutely critical," explained Gissentanna, "because it sets the threshold for spending."

Most IT expenditures that require funding documents are part of projects or programs that are external to SPAWAR – and these make up the majority of the command's business. Program approval can be validated with tasking statements, needs statements, requirements documents or funding documents.

Programs that are internal to SPAWAR generally use abbreviated acquisition program papers for program approval and information technology acquisition papers for IT services contract approval.

"At SPAWAR we've tried to tailor LCM to meet the requirements of the law and yet keep the process as simplified as possible," said Folley.

The challenge, though, is educating purchasers on the scope of IT resources that require an LCM number. "If you think about it, probably 90 percent of what we do at SPAWAR is IT," said Gissentanna. Her team recently found that approximately 43 percent of IT purchases were not coming to their office for approval. That's why they are holding training sessions and working hard to get the word out about LCM.

"People don't realize what the definition of IT encompasses," added Folley. "The best thing to do is call us if you are not sure."

LCM team members can provide guidelines for LCM procedures and compliance. They can be reached at 218-4254 or 218-6745.

New Executive Officer of military personnel on board

By Tonya Lobbestael
Editor, The Chronicle

Cdr. Cloyes R. "Red" Hoover joined the SSC Charleston team in June as the new Executive Officer (XO) of military personnel and the FORCEnet systems engineer. Hailing from Naval Sea (NAVSEA) Systems Command in Washington, D.C., Cdr. Hoover brings a wealth of combat systems and systems integration experience to SSC Charleston.

"I'll be working quite a bit with the Object of Expense (OE) group on FORCEnet," Cdr. Hoover explained. In his new role, Cdr. Hoover plans to help make the connection between NAVSEA, the Naval Air Systems Command (NAVAIR), and the E-2 community in order to strengthen the relationship between combat systems and C4I.

Cdr. Hoover's experience as the Fleet Support and Aegis Integration Manager for Program Executive Officer Integrated Warfare Systems Command and Control Directorate (PEO IWS 6N) at NAVSEA, and his previous work with the Navy capital fund at Puget Sound Naval Shipyard offer a strong background in both engineering to support the warfighter and business management. Now he says his challenge is learning the C4I part. "There are definitely a lot of really smart engineers and folks here that I can learn from," he said.

Photo by Harold Senn

Cdr. Cloyes R. "Red" Hoover is the new Executive Officer of military personnel at SSC Charleston.

As Executive Officer of military personnel, he will work with the active duty personnel staff, focusing especially on training.

The active duty officers at SSC Charleston "come in as training Engineering Duty Officers that are here to qualify," Cdr. Hoover explained. "My goal is to bolster their experiences to make sure they get the best opportunity to get all of their qualifications done."

"There are changes that are happening in the Navy in the engineering arena," he continued. "There are certain experiences you need to make yourself promoteable so we're working on helping folks understand how to diversify."

Cdr. Hoover is also focused on ensuring officers are involved in professional training. "Part of our mission as Engineering Officers in the Navy is to be the technical liaison to our community. Staying current in technology is really vital to what we are doing," he stated.

"There are changes that are happening in the Navy in the engineering arena. There are certain experiences you need to make yourself promotable so we're working on helping folks understand how to diversify."

Cdr. "Red" Hoover
Executive Officer for Military Personnel

Watkins receives Navy Superior Civilian Service Award

By Tonya Lobbestael
Editor, The Chronicle

Recently retired SSC Charleston Business Manager Terry Watkins received the Navy Superior Civilian Service Award in October. The award, which was signed by Rear Adm. Ken Slaght, was presented by SSC Charleston Commander Capt. John W.R. Pope III and Executive Director James Ward.

The citation acknowledged Watkins accomplishments as Business Services Manager crediting him for accepting "the challenge of developing the human resources, financial, contracting, and logistics infrastructure to support the stand-up of the new command, NISE East, created as a result of BRAC 93."

Photo by Harold Senn

Capt. John W.R. Pope III and Executive Director James Ward present the Navy Superior Civilian Service Award to Business Manager Terry Watkins (ret.).

Watkins was recognized for being instrumental in the transition from the NCCOSC Navy Working Capital Fund financial system to the Department of Defense's interim migratory systems, DIFMS. He was also honored for his ability to integrate engineering and technical work with business processes.

"To me, this is an award for all the people in the business area," said Watkins. "I'm just the one it gets presented to."

Marquart named certified information systems security professional

By Jim Condon (J57)
SPAWAR Europe

Mairi Marquart (J571) recently earned the honor of Certified Information Systems Security Professional (CISSP) from the International Information Systems Security Certification Consortium, Inc. or $(ISC)^2$. $(ISC)^2$ is the non-profit international leader dedicated to training, qualifying and certifying information security professionals worldwide.

CISSP certification was designed to recognize mastery of an international standard for information security and understanding of a Common Body of Knowledge (CBK). To earn CISSP certification, Marquart had to have four years of direct work experience in one or more of the ten test domains of the information systems security CBK. She also had to subscribe to the $(ISC)^2$ code of ethics, and pass the CISSP exam and receive endorsement from a CISSP.

Marquart is an Information Assurance Manager in the SPAWAR Europe office in Stuttgart, Germany. She is the principal advisor to the Commander, 6th Area Support Group (ASG) on information assurance issues and policy for the organization. She also serves as the ASG certification agent responsible for certifying all information systems for accreditation.

Photo by Chris Rynearson

Mairi Marquart earned CISSP certification.

Cheryl Hawkins keynote speaker at BOSS

By Robert K. Schell (J772)

Cheryl Hawkins (J772) was the keynote speaker at the Business Optimization Software Summit (BOSS) 2004 in Orlando, Fla. Hawkins spoke on the Bureau of Medicine and Surgery's (BUMED) Summarized Management Analysis Resource Management Tool (SMART) that she manages before the capacity crowd.

Hawkins' discussion on business performance management included a case study of SMART using TM1, an extremely powerful online analytical processing tool that enables multi-dimensional modeling.

TM1 serves as the database engine for BUMED's SMART tool. Conference sponsors Applix Inc. developed the initial version of TM1 over twenty years ago. They continue to enhance the tool as new technological advances relating to business performance management and business intelligence emerge.

The SMART case study demonstrated the performance of TM1 as the Bureau of Medicine and Surgery successfully implements an enterprise-wide business performance management strategy. Cheryl discussed the requirements that drove the development of SMART and provided some suggestions regarding selection of enabling technology to support corporate performance management.

Photo courtesy of Robert Schell

BOSS 2004 speaker Cheryl Hawkins.

The keynote address concluded with a summary of the tangible benefits of SMART in the BUMED organization. These include the delivery of standard business goals, practices and measurements. These practices and measurements provide standardized data that allow more accurate strategic planning and business intelligence.

When asked what is the single most important aspect of implementing corporate performance management in any organization, Hawkins said, "The culture is the greatest challenge but good executive leadership can drive the change, and once the benefits become apparent throughout the enterprise, there is no turning back."

Phillips receives financial management fellowship

Prestigious opportunity leads to full-time studies

By Tonya Lobbestael
Editor, The Chronicle

Julie Phillips (J0131) was awarded the prestigious Secretary of the Navy Civilian Fellowship in Financial Management to pursue full-time graduate level studies for one year. She was notified of her selection by the Assistant Secretary of the Navy, Financial Management and Comptroller on July 14.

Phillips is an administrative specialist who assists in the planning, training, and Command-wide implementation of the Navy-wide mandated time and attendance system, Standard Labor Data Collection and Distribution Application. She also serves as the primary financial advisor for the Employee Services Association, and as financial systems analyst providing technical and application support to internal and external customers.

Congratulations Julie!

Photo by Harold Senn

Financial management fellowship recipient Julie Phillips.

Photo by Harold Senn

SPAWAR Deputy Director Scott Randall discusses fit vs. viability and core vs. context with SSC Charleston team members during his July visit to the command.

Photo by Harold Senn

Brig. Gen. William D. Catto, USMC, Commanding General, Marine Corps Systems Command is greeted by Capt. Pope.

Photo by Harold Senn

Vice Adm. Stanley Szemborski, Principal Deputy Director, Program Analysis Evaluation, Office of the Secretary of Defense is greeted by Will Chiaiese (right) and James Ward.

Photo by Harold Senn

Defense Contract Audit Agency representatives Brad Steele (left), DCAA Director William H. Reed, Nina Kissinger and Sylvia Wofford visit with James Ward.

Photo by Harold Senn

Angelous Angelous (left) of Angelous Economics visits with Capt. John W.R. Pope III and James Ward.

SPAWAR Systems Center, Charleston salutes the Tactical Support Center!

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